



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,457	05/24/2006	Hideo Ohashi	290490US40PCT	5530
22850 7590 09/22/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WALBERG, TERESA J	
			ART UNIT	PAPER NUMBER
			3744	
			NOTIFICATION DATE	DELIVERY MODE
			09/22/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,457	<b>Applicant(s)</b> OHASHI, HIDEO	
	<b>Examiner</b> Teresa J. Walberg	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/29/06, 8/22/06, 5/24/06</u> .                              | 6) <input type="checkbox"/> Other: ____.                          |

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashiyama (WO 02/068892) in view of Tooyama et al (US 2001/0040027) and JP 8-10764 (inventor unknown).

Higashiyama discloses a heat exchanger (Fig. 1) including a plurality of flat refrigerant passing bodies (3) arranged in parallel at a spacing, corrugated fins (13) arranged between pairs of the refrigerant passing bodies (3), refrigerant inlet and outlet headers arranged on the upper side of the heat exchanger core side by side in the front-rear direction (Fig. 1), each having at least one end positioned at a widthwise outer end of the heat exchange core (Fig. 1), a refrigerant inlet at one end and a refrigerant outlet alongside the inlet (721, 722), a second fin (13) being disposed outside the refrigerant passing body positioned at the widthwise outer end of the core (Fig. 1), a side plate (14) disposed externally of the second fin (Fig. 1), a refrigerant flowing into the inlet header through the inlet and returns to the outlet header after flowing through all the refrigerant passing bodies and is sent out from the outlet (Fig. 1), the second fin and side plate having upper ends so positioned as to permit an upper portion outer surface of the core end refrigerant passing body to be exposed (Fig. 1), the

Art Unit: 3744

inflow and outflow members being arranged on the core-end refrigerant passing body at an external portion thereof above the second fin and the side plate (Fig. 1), the inflow member being connected to the inlet of the inlet header, the outflow member being connected to the outlet of the outlet header (Fig. 1), the inflow and outflow member having outer side faces positioned laterally externally of the heat exchange core (Fig. 1).

Higashiyama does not disclose the outer side faces of the inflow and outflow members being positioned within an upward extension of the plane of an outer side face of the side plate or inwardly of the extension.

Tooyama et al shows a heat exchanger having adjacent inflow and outflow member bent so as to be positioned within a confined space (Figs. 6A and 6B).

JP 8-10764 shows a heat exchanger (Fig. 6) having a connector (5) positioned to be within an upward extension of the plane of an outer side face (6) of a side plate or inwardly of the extension (Figs 2 and 6).

It would have been obvious in view of Tooyama et al to position the inflow and outflow members of Higashiyama so as to fit within a confined space and in view of JP 8-10764 to position the inflow and outflow members of Higashiyama within an upward extension of the plane of an outer side face of the side plate or inwardly of the extension, the motivation being to enable positioning the heat exchanger of Higashiyama within a narrower space.

Art Unit: 3744

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/  
Primary Examiner, Art Unit 3744

/TW/